

CLAIMS

1. A multi-ticket-type game ticket self-service terminal, said terminal comprising, in combination, a housing, a plurality of ticket dispensers in said housing, each adapted to dispense one of a plurality of different types of game tickets from said housing, said types including tickets stored in strips in which individual tickets are delineated from one another by lines of weakness, and lottery tickets bearing numbers for use in a drawing to determine a winner, a currency acceptor device to accept currency and produce a corresponding credit, detector means for detecting the amount of winnings a winning ticket is worth, and credit means for making a credit in the amount of such worth available for use in buying from said terminal tickets of a type different from said winning ticket.
2. A self-service terminal as in Claim 1 in which said ticket types include instant-winner pull-tab tickets stored in stacks of separate tickets.
3. A self-service terminal as in Claim 1 in which said detector means includes means for reading a code from each ticket inserted into said reading means, and means for comparing said code with stored information indicating which tickets are winners and the winning amounts thereof.
4. A self-service terminal as in Claim 2, said housing having a plurality of windows with one of said dispensers for pull-tab tickets adjacent to each window, said dispensers each being adapted to move a ticket past one of said windows with the ticket visible from outside of said housing, each of said dispensers including a holding support structure for holding said tickets in a stack with the tickets in said stack on edge, said stack having a front end, and a rear end, with a front ticket at said front end adjacent to and visible through one of said windows, and dispensing drive means for moving the ticket at said front end in a

path parallel to said window to dispense it from said machine while said ticket is visible through said window.

5. A self-service terminal as in Claim 1 in which said types include incomplete tickets with a printer to complete said tickets.

6. A self-service terminal as in Claim 1 including a dispensing mechanism for dispensing tickets from each of said strips, and in which said housing has one window for each dispensing mechanism, each mechanism including drive means for moving said strip of tickets, said drive means being located above said window and being adapted to pull said strip upwardly past said window with said strip visible from outside of said housing, and guide means for guiding at least one ticket from said strip through an outlet opening out of said housing.

7. A self-service terminal as in Claim 1 including a dispensing mechanism, for dispensing tickets from each of said strips, each said dispensing mechanism including a separator mechanism for separating tickets from one another before being guided out of said housing, said separator mechanism including at least one rotary helical blade and at least one detector for detecting the position of said tickets and a drive device for rotating said blade to separate said tickets.

8. A self-service terminal as in Claim 1 in which tickets from each of said strips are dispensed by a dispensing mechanism, each dispensing mechanism including a separator/drive module, said module comprising a housing, inlet and outlet openings in said housing, a rotary separator member rotatably mounted in said housing and positioned to span one of said strips and extend in a direction transverse to said strip, a first ticket drive device in said housing between said inlet opening and said separator member to move said strip to a separation location, and

a second ticket drive device for moving at least one ticket away from said separator member and through said outlet opening.

9. A self-service terminal as in Claim 1, each dispensing mechanism including a separator for separating at least one ticket from said strip, said guide means comprising feed means for first feeding said ticket away from said separator while remaining in said housing, and then outwardly through said outlet opening, trailing edge first.

10. A multi-ticket-type game ticket self-service terminal, said ticket terminal comprising, in combination, a housing, a plurality of ticket dispensers in said housing, each adapted to dispense one of a plurality of different types of game tickets from said housing, said types including tickets stored in strips in which individual tickets are delineated from one another by lines of weakness, and instant-winner pull-tab tickets stored in groups of separate tickets, said housing having a plurality of windows with one of said dispensers adjacent thereto, said dispensers each being adapted to move a ticket past one of said windows with the ticket visible from outside of said housing.

11. A self-service terminal as in Claim 10 in which each of said dispensers for said separate tickets includes a holding support structure for holding said tickets in a stack with tickets in said stack on edge, said stack having a front end, and a rear end, with a front ticket at said front end adjacent to and visible through one of said windows, and dispensing drive means for moving the ticket at said front end in a path parallel to said window to dispense it from said machine while said ticket is visible through said window.

12. A method of vending gaming tickets of a variety of different types, said types including at least two types selected from the group consisting of, tickets stored in strips in which individual tickets are delineated from one another by lines

of weakness; instant-winner pull-tab tickets stored in groups; lottery tickets bearing numbers for use in a drawing to determine a winner, the steps of:

- (a) accepting money deposited in said machine and providing corresponding credits,
- (b) dispensing from said machine a number of tickets of a type selected by a buyer corresponding to the amount of said credits,
- (c) detecting the amount of winnings attributable to one of said tickets of a first type, and
- (d) developing corresponding credits towards purchases of tickets of one of said other types.

13. A method as in Claim 12 including reading a code from a ticket presented for credit and determining said amount of winnings by reference to a computer data base.

14. A method as in Claim 12 in which said lottery tickets for use in a later drawing include tickets for a game selected from the group consisting of lotto, keno and games in which groups of numbers are selected, such as "pick three" or "pick four", as well as non-completed tickets for later completion.

15. A ticket dispenser having a housing with at least one window, as well as a storage area for storing an elongated strip of tickets delineated from one another by lines of weakness, drive means for moving said strip of tickets, said drive means being located above said window and being adapted to pull said strip upwardly past said window with said strip visible from outside of said housing, and guide means for guiding at least one ticket from said strip through an outlet opening and out of said housing.

16. A dispenser as in Claim 15 including a separator mechanism for separating tickets from one another before being guided out of said housing, said

separator mechanism including at least one rotary helical blade and at least one detector for detecting the position of said tickets and rotating said blade to separate said tickets.

17. A dispenser as in Claim 16 in which said housing has a plurality of said windows and storage areas arranged in a linear array, said separator mechanism including a single shaft with helical portions spaced along its length, one for each of a plurality of said strips from which tickets are to be dispensed, said drive means being adapted to move each of said strips independently from the other.

18. A dispenser as in Claim 16 in which said drive means includes two sets of drive rollers with adjacent rollers mounted to rotate independently of one another on the same shaft, a common drive motor and a clutch for selectively driving each of said sets of drive rollers through a single drive shaft.

19. A dispenser as in Claim 15 including a separator for separating at least one ticket from said strip, said guide means comprising feed means for first feeding said ticket away from said separator while remaining in said housing, and then outwardly through said outlet opening.

20. A dispenser as in Claim 19 including a detector for detecting the trailing edge of said ticket and producing a corresponding signal, and feed means responsive to said signal for reversing said feed means to thrust said ticket through said outlet opening, trailing edge first.

21. A dispenser as in Claim 20 in which said detector is positioned and conditioned to detect the trailing edge of a connected string of said tickets and produce a corresponding signal, said feed means being responsive to said signal to feed said ticket string out through said outlet opening, trailing edge first.

22. A ticket dispenser for dispensing tickets from an elongated strip in which said tickets are delineated from one another by lines of weakness, said dispenser having a housing with a dispensing outlet opening, a storage area in said housing for storing said strip, a separator mechanism, a feed mechanism for feeding a ticket separated from said strip out of said housing through said outlet opening, said feed mechanism including means for first feeding said ticket away from said separator while remaining in said housing, and then outwardly through said outlet opening.

23. A dispenser as in Claim 22 including a detector for detecting the trailing edge of said ticket and producing a corresponding signal, and feed means responsive to said signal for reversing said feed mechanism to thrust said ticket through said outlet opening, trailing edge first.

24. A dispenser as in Claim 23 in which said detector is positioned and conditioned to detect the trailing edge of a connected string of said tickets and a corresponding signal, said feed means being responsive to said signal to feed said ticket string out through said outlet opening, trailing edge first.

25. A dispenser as in Claim 22 including a guide for guiding said ticket to turn through a substantial angle and enter the nip of a pair of drive rollers, means for driving said drive rollers until the trailing edge of said ticket reaches a predetermined location, and then reversing said drive rollers to drive said ticket through said outlet opening trailing edge first.

26. A dispenser as in Claim 22 in which said separator has a rotary member with a helical projection and means to position one of said lines of weakness of said strip adjacent said projection and rotate said rotary member to separate said tickets from one another.

Sub 16 27. A separator/drive module for driving and separating tickets from a strip of tickets in which individual tickets are delineated from one another by lines of weakness, said module comprising a housing, inlet and outlet openings in said housing, a rotary separator member rotatably mounted in said housing and positioned to span said strip and extend in a direction transverse to said strip, a first ticket drive device in said housing between said inlet opening and said separator member to move said strip to a separation location, and a second ticket drive device for moving at least one ticket away from said separator member and through said outlet opening.

28. A module as in Claim 27 including a drive motor in said housing with a drive transmission for selectively driving said first and second ticket drive devices, and a separator motor for selectively rotating said separator member.

Sub 17 29. A module as in Claim 27 in which said separator member has a shaft with a helical projection therefrom, and including a drive motor in said housing for selectively rotating said shaft to separate tickets in said strip.

30. A module as in Claim 27 in which said module is adapted to dispense tickets through a plurality of channels, each having an outlet opening in said housing, said rotary separator member spanning the paths of tickets through each of said channels and having shaft with a helical projection portion for each channel, and a motor in said housing to rotate said shaft to separate tickets in any of said channels.

31. A module as in Claim 27 in which said module is adapted to dispense tickets through a plurality of channels, each having an outlet opening in said housing, said first drive device comprising a first drive roller and at least one idler roller, all of said first drive rollers being independently rotatably mounted on a first common shaft, said second ticket drive device comprising a second drive roller and

at least one idler, all of said second drive rollers being drivably secured to a second common shaft, a drive motor driving a drive shaft with a drive member and a clutch on said drive shaft for each of said channels, each drive member engaging a mating drive member secured to one of said first drive rollers, said clutches being selectively operable to drive tickets in each channel separately from those in another channel, and drive members drivably coupling said drive shaft to said second common shaft.

32. A module as in Claim 27 including an elongated support structure forming a cylindrical enclosure for said separator member said enclosure having relatively narrow inlet and outlet slots to hold said strip adjacent said separator member in a position to be contacted forcefully by said separator member when it is rotated.

33. A pull-tab lottery ticket self-service terminal, said machine having a housing with a plurality of dispensers and a window and outlet opening in said housing for each dispenser, in which each of said dispensers for said pull-tab tickets includes a holding support structure for holding said tickets in a stack with tickets in said stack on edge, said stack having a front end, and a rear end, with a front ticket at said front end adjacent to and visible through one of said windows, and dispensing drive means for moving the ticket at said front end in a path parallel to said window to dispense it from said machine through said outlet opening with said ticket being visible through said window.

34. A self-service terminal as in Claim 33 in which said tickets are elongated and are stacked with the longitudinal axis extending substantially vertically, and said dispensing drive means is selected from the group consisting of at least one roller drive mechanism for engaging said front ticket and driving said ticket in a substantially vertical direction; a belt drive to create the same motion;



and a pusher plate with an activating mechanism for pushing said ticket in a substantially vertical direction.

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